REMARKS

Initially, Applicants wish to thank the Examiner for the detailed Office Action and for the Notice of References Cited. In the outstanding Office Action, claim 1 was rejected under 35 U.S.C. §103(a) over ASANO (U.S. Patent Application Publication No. 2003/0185236) in view of CHIN (U.S. Patent No. 7,277,453). Claims 2-7 were rejected under 35 U.S.C. §103(a) over ASANO and CHIN in view of DONAHUE (U.S. Patent No. 7,020,720). Claims 8-26 were rejected under 35 U.S.C. §103(a) over ASANO in view of DONAHUE.

Applicants traverse the rejection of claim 1 under 35 U.S.C. §103(a) over ASANO in view of CHIN. Although the Office Action asserts, at page 3, that ASANO discloses the invention "substantially as claimed", the Office Action applied ASANO merely for its teaching of routing data packets from a subscriber device, over a broadband access link, through a first internet protocol version 6 (IPv6) network to a second internet protocol network edge device. The Office Action acknowledges that ASANO does not, in fact, teach most of the features as claimed, and relies upon CHIN as teaching the numerous features acknowledged to be absent in ASANO.

Claim 1 recites, *inter alia*, assigning a second IP address to a subscriber device based on a request routed through a first IP network from the subscriber device, the second IP address being associated with the second IP network. Claim 1 also recites, *inter alia*, forwarding a data packet addressed with both a first IP address and the second IP address, from the subscriber device. The Office Action cites Figures 3 and 6 and column 6, lines 55-67 and column 11, lines 10-30 and 35-41 of CHIN as teaching the above-noted features. In this regard, CHIN discloses "virtualizing" private IPv4 hosts, by associating an IPv4 host with an IPv6 address, such that a connection may be de-multiplexed based on a destination IPv6 address, rather than using a

combination of a gateway global IPv4 address and a port number. CHIN further discloses that an originating private network has an address space from which to allocate an IPv4 address for a destination host, and that an IPv4-to-IPv6 mapping can be created for each destination IPv4 host with which communications are desired. That is, the cited portions of CHIN disclose that a private IPv4 host in an originating private network is able to directly address a peer, remote IPv4 host with a uniquely allocated IPv4 address.

Neither ASANO nor CHIN, either singularly or in the proposed combination, disclose or render obvious assigning a second IP address to the subscriber device based on a request routed through a first IP network from a subscriber device, the second IP address being associated with a second IP network, as recited in claim 1. Rather, the IPv4 address in CHIN uniquely allocated to a remote host with which communication is desired is allocated from a private IPv4 address space for an originating host, i.e. within an originating network. CHIN discloses that gateway-B 264 synthesizes a global IPv6 address for a host H1-B and returns the global IPv6 address to a gateway-A 214. CHIN further discloses allocating a private IPv4 address (from an address space for originating host H1-A) that is associated with the global IPv6 address. Subsequently, CHIN discloses that host H1-A (in the originating network) sends packets to the host H1-B (in a destination network) addressed with the allocated, private IPv4 address.

Moreover, neither ASANO nor CHIN, either singularly or in the proposed combination, disclose or render obvious forwarding a data packet addressed with both a first IP address and a second IP address, from a subscriber device, as recited in claim 1. In this regard, packets sent from a host H1-A disclosed by CHIN are addressed with a private IPv4 address for a remote host H1-B. CHIN discloses that an IPv4-to-IPv6 translator subsequently employs a mapping to: 1) obtain an IPv6 address for packets addressed with the private IPv4 address; and 2) make a

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connection. CHIN further discloses that the packets generated by the IPv4-to-IPv6 translator are IPv6 packets. That is, the originating host H1-A cannot address a packet with both the private IPv4 and the global IPv6 address insofar as the originating host does not have the global IPv6 address for the destination remote host H1-B. In fact, CHIN teaches away from forwarding a packet addressed with both a first IP address and a second IP address, from the subscriber, as specified in claim 1, insofar as CHIN discloses that a local IPv4 address is returned to a local host and from the perspective of the local host receiving a "peer" local address (i.e., the local IPv4 address), the destination host is another IPv4 host and is unaware that tunneling is used to deliver packets (*see*, for example, column 11, lines 25-30 of CHIN). Further, the mapping performed by the IPv4-to-IPv6 translator disclosed by CHIN would be rendered superfluous if the packets sent to a translator were addressed with both a first IP address and a second IP address, as specified in claim 1.

CHIN discloses that a global IPv6 address is constructed by adding an IPv6 prefix to an existing IPv4 address. Even assuming, *arguendo*, that the IPv4 address and the IPv6 prefix disclosed by CHIN were considered to disclose a first IP address and second IP address as specified in claim 1, CHIN does not disclose forwarding a data packet addressed with both the first IP address and the second IP address, *from the subscriber device*, as recited in claim 1. That is, CHIN merely discloses tunneling packets between gateways. Further, the IPv6 prefix does not disclose either a first IP address being compliant with a first protocol implemented by a first IP network, as recited in claim 1 or a second IP address being compliant with a second protocol distinct from the first protocol implemented by the second IP network, as recited in claim 1. That is, an IPv6 prefix is not sufficient to route a packet through a network in compliance with a first protocol, as specified in claim 1 or in compliance with a second protocol, as specified in

claim 1. That is, IPv6 prefix must be prefixed to a complete IPv4 address in order to address a packet that is routable through a network. Affixing an IPv6 prefix described by CHIN to a complete IPv4 address does not disclose a second IP address being compliant with a second protocol distinct from the first protocol implemented by the second IP network, as recited in claim 1.

Accordingly, claim 1 is allowable over ASANO and CHIN. Reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §103(a) over ASANO and CHIN is requested.

Applicants traverse the rejection of claims 2-7 under 35 U.S.C. §103(a) over ASANO and CHIN in view of DONAHUE. In this regard, arguments made above with respect to independent claim 1 are substantially applicable. Further, DONAHUE does not cure the deficiencies of ASANO and CHIN. That is, none of ASANO, CHIN and DONAHUE, either singularly or in any proper combination, disclose or render obvious assigning a second IP address to the subscriber device based on a request routed through a first IP network from a subscriber device, the second IP address being associated with a second IP network, as recited in claim 1. Further, none of ASANO, CHIN and DONAHUE, disclose or render obvious forwarding a data packet addressed with both the first IP address and the second IP address, from a subscriber device, in which both the first IP address and the second IP address are assigned to the subscriber device, as specified in claim 1.

Each of dependent claims 2-7 are allowable at least because they depend, directly or indirectly, from independent claim 1, which Applicants have shown to be allowable. Each of dependent claims 2-7 are also believed to recite further patentable subject matter. As such,

allowance of the dependent claims is deemed proper for at least the same reasons noted for the independent claim upon which they depend, in addition to reasons related to their own recitations.

Accordingly, reconsideration and withdrawal of the rejection of claims 2-7 under 35 U.S.C. §103(a) over ASANO and CHIN in view of DONAHUE is requested.

Applicants traverse the rejection of claims 8-26 under 35 U.S.C. §103(a) over ASANO in view of DONAHUE. The Office Action relies on ASANO in substantially the same manner as asserted with respect to the rejection of independent claim 1 over ASANO and CHIN, and relies on DONAHUE as teaching the features acknowledged to be absent in ASANO. In this regard, the Office Action cites column 5, lines 30-64, column 6, lines 36-50 and column 6, line 64 through column 7, line 41 of DONAHUE as teaching sending a DHCP response through the IP network to an originating device using a first subscriber IP address, enabling the originating device to obtain a second subscriber IP address from the DHCP response and forward subsequent data packets addressed with both the first subscriber IP address and the second subscriber IP address, as recited in claim 8. In particular, the Office Action asserts that DONAHUE teaches allocating IP address to hosts in a private network by using a DHCP server to identify a source and destination host from a packet sent by a user. However, as previously argued in the Response to the previous Office Action, DONAHUE merely discloses a publicly routable address and a private address, each of which are not used together, but rather are used in the alternative. That is, neither DONAHUE nor ASANO, either singularly or in any proposed combination, disclose or render obvious enabling an originating device to obtain a second subscriber IP address from a DHCP response and forward subsequent data packets addressed with both a first subscriber IP address and the second subscriber IP address, as recited in claim 8.

Accordingly, for at least the reasons set forth above, claim 8 is allowable over ASANO in and DONAHUE.

Claim 18 is allowable for reasons similar to those discussed with respect to claims 1 and 8, in addition to reasons related to their own recitations. For example, neither ASANO nor DONAHUE disclose or render obvious a second DHCP server in a second IP network that receives a DHCP request from the originating device through the at least one edge device and allocates a second subscriber IP address to the originating device, as in claim 18. In addition, neither ASANO nor DONAHUE disclose or render obvious that a second subscriber IP address is associated with a second IP network, as in claim 18. Moreover, neither ASANO nor DONAHUE disclose or render obvious that an originating device forwards data packets with both the first subscriber IP address and the second subscriber IP address, as in claim 18.

Claims 9-17, and 19-26 are allowable at least for depending, directly or indirectly, from an allowable independent claims 8 and 18, as well as for additional reasons related to their own recitations.

Accordingly, reconsideration and withdrawal of the rejection of claims 8-26 under 35 U.S.C. §103(a) over ASANO in view of DONAHUE is requested.
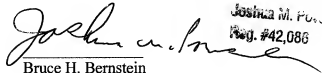
At least in view of the herein contained remarks, Applicants request reconsideration and withdrawal of each of the outstanding rejections, together with an indication of the allowability of all pending claims, in due course. Such action is respectfully requested and is believed to be appropriate and proper.

Should an extension of time be necessary to maintain the pendency of this application, including any extensions of time required to place the application in condition for allowance by

an Examiner's Amendment, the Commissioner is hereby authorized to charge any additional fee
to Deposit Account No. 19-0089.

Should the Examiner have any questions, the Examiner is invited to contact the
undersigned at the below-listed telephone number.

Respectfully Submitted,
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